EU school fruit scheme: Strengthening local businesses
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Background
The EU School Fruit Scheme (SFS) provides children with fruits and vegetables (F&V), aiming to promote consumption of those products among European school children. In addition, the program aims to stabilize the F&V market in the EU. The latter objective is the focus of our study. The program varies between EU countries and even within some countries, e.g. in Germany between different federal states involved in the SFS. This paper will concentrate on the specific situation in North Rhine-Westphalia (NRW), Germany.

Firms interested to provide schools with F&V in the framework of the SFS in NRW can apply for authorization. Schools eligible to receive F&V in the context of the SFS can choose from the list of authorized suppliers. The price F&V suppliers receive is fixed (28 cents/100 g) as is the quantity of F&V each child receives (100g/day). Suppliers, however, can differentiate themselves from their competitors via the quality, origin and variation as well as the service of their offer. So far little is known about this specific market segment.

Research Questions
- What is the market structure (concentration) and how has this changed over the last years?
- What are the characteristics/motivations of firms?
- What are the key determinants of success?
- Are incentives of the SFS set in the right way?

Findings
- Between 83 and 103 firms were actively involved in the SFS in NRW in the period 2009/10 to 2012/13
- Market concentration has been relatively high (Gini coefficient > 0.5; see Fig. 1) and increased over the period 2009/2010 to 2011/2012, however in 2012/2013 a slight decline in concentration can be observed.
- Combining qualitative information of firms with sale volumes allows to distinguish different types of actors:
  - Small F&V retailers and F&V producers in urban areas: These firms are active in the acquisition of new schools, have as a group a high market share in the overall SFS, and the SFS sales make up a considerable share of their respective business sales. Participation in the SFS seems to be commercially rewarding. These firms can respond quickly and flexibly to the requests of schools.
  - Big firms (e.g. retailers): The logistics of these firms are oversized for the small quantities to be delivered to schools. Their relevance in the overall SFS in NRW is low and the sales of the SFS are negligible relative to the size of their overall business.
  - Small F&V retailers and F&V producers in semi-urban areas: Those firms are often highly embedded in the communities where they supply schools. They are in general not active in the acquisition of new schools. Some of these suppliers offer organic F&V and a personal level of communication. Their participation in the SFS is not primarily profit motivated.
  - Schools in geographically favorable location and those with a large number of pupils are most interesting for suppliers due high fixed costs of delivery. These schools seem to be better treated (e.g. higher variety of F&V) than schools in remote areas or small schools. Fig. 2 shows a correlation of - 0.21 (Pearson, p = 0.01) between the school size and the variety of the F&V deliveries measured by a Gini coefficient analysis of the relative amounts of delivered F&V species.

Conclusion
The SFS in NRW seems to be attractive for small firms. To generate high profits it is necessary to assert against competitors by quick and flexible reactions. Schools with a large number of pupils benefits from this situation by getting a better variety of F&V.

![Fig. 1 Lorenz curve of sales distribution](image1.png)

![Fig. 2 Relation between delivered variety of F&V and purchase quantity of schools 2011/2012](image2.png)